Expanding Equity in the Early Grades through Art and Nature Study

Liane Brouillette
University of California, Irvine

Abstract
This article examines the goal of kindergarten, along with how the youngest members of a kindergarten cohort may be disadvantaged by an over-emphasis on reading skills. Evidence is examined, showing that kindergartners benefit from learning practical, social, artistic and oral language skills. Effective ways that early elementary school teachers can awaken children's desire to learn through hands-on aesthetic and nature study projects are described.

Keywords
Kindergarten, Oral Language, Aesthetic Education, Nature Study, Social Skills

In recent years, the early elementary curriculum in U.S. public schools has been transformed by pressures to boost academic achievement. These changes have been most noticeable in kindergarten, which has been converted from a playful interlude focused on children's social, emotional, and moral development to the beginning of serious academic instruction (Russell, 2011). Scholars have studied the backward mapping of expectations from standardized tests into earlier grades (Bassok, Latham, & Rorem, 2016) and have warned that kindergarten is becoming one-sidedly focused on teaching academic content (Graue, 2009).

As Elliot Eisner (2002) observed, human beings learn by forming representations of experiences. Children's ability to visualize a scene—whether encountered through art or in real life—allows them to stabilize the image and remember it. For adults, this process may be abstract; but, for young children, concrete representation is critical to understanding (Inhelder & Piaget, 1958). As Parsons (1992) pointed out, when aesthetic and linguistic means of comprehension interact, a more complete picture of the world is provided, one that combines insights derived from both language and the arts.

Building a Foundation for Learning

Until recent decades, kindergarten was allowed to function as a unique learning environment, different from the elementary grades in its emphasis the whole child, on play and on an non-academic climate (Cuban, 1992). In the 1960s kindergarten teachers had considerable discretion regarding their choice of classroom activities. But soon the focus on social skills, puppets, drawings, vocabulary and games would give way to academic expectations. As time passed, kindergarten came to resemble first-grade classrooms in its emphasis on formal reading and math instruction. Researchers began to warn of dangers inherent in this trend (Elkind 1986; Hatch and Freeman 1988; Plevyak and Morris 2002; Walsh 1989).

Shepard and Smith (1988) observed that academic demands in kindergarten and first grade were considerably higher in the late 1980s than they had been 20 years earlier. A narrow emphasis on isolated reading and numeracy skills was proving detrimental, even to children who were successful. But it was especially harmful to children who were labeled failures. Still, academic demands continued to escalate, through a downward shift of next-grade expectations into earlier grades. This shift was caused by large-scale social trends, such as the universality of kindergarten, the day-to-day pressure for accountability that was felt by teachers and demands for acceleration from middle-class parents. Policies such as raising the entrance age, readiness screening and kindergarten retention were intended to solve the problem of inappropriate academic demands by removing younger or unready children. However, research evidence has not supported the efficacy of these policies. Instead, these practices contributed to the continued escalation of curriculum as teachers adjusted their teaching to an older and more able group.

More recently, Bedard & Dhuey (2006) found that—because of the use of a single school cutoff date—the "oldest" children in a traditional U.S. kindergarten cohort were 20% older than the youngest. These initial maturity differences were shown to have long-lasting effects on student performance. The youngest members of each kindergarten cohort still scored 4–12 percentiles lower than the oldest members of the cohort when they had reached fourth grade. Further, they still scored 2–9 percentiles lower when they reached grade eight. What caused this? Cuhna, Heckman, Lochner, and Masterov (2006) argued that the skills accumulated in early

childhood are complementary to later learning. Moreover, a lack of such skills can hold children back. This may have been happening to the youngest members of a kindergarten cohort, who still needed time to build practical, social-emotional and vocabulary skills. Whereas, research shows that English-speaking children who learn to read later catch up with children who learn to read at a younger age (Suggate, Schaughency & Reese, 2013). So, we may be sacrificing the interests of the younger children in each kindergarten cohort by insisting that they learn to decode words before they are ready—a policy that provides no real benefit to the older members of the cohort.

Ironically, children in most Western European nations enter elementary school and learn to read at the age of 6 (European Commission, 2018), which is a year later than in the U.S. As Catherine Snow (2020) noted: "All over the world, kids start to learn to read at 6-1/2 or 7. There's nothing magic about learning to read at 5 or at 4. The American obsession is how can we do it earlier, how can we do it faster. And that doesn't necessarily make it better or easier."

The Original Goal of Kindergarten

Taking a moment to reflect on the purpose of kindergarten may be helpful. Friedrich Fröbel (1782-1852) created the concept of the kindergarten and played an essential role in ushering both art and nature study into the school curricula (Strauch-Nelson, 2012). In his book *The Education of Man,* published in Germany in 1826 and translated into English by W.N. Hailmann in 1887, Fröbel argued that children have unique needs and capabilities. He assert**ed** that the teacher's role was not to drill or indoctrinate but to encourage self-expression through play. Margarethe Schurz founded the first German-speaking kindergarten in the United States in Wisconsin (Tarr, 1989). Elizabeth Peabody became a convert to Fröbel's kindergarten ideas and opened the first English-speaking kindergarten in Boston in 1860. Peabody explained:

> Froebel's Kindergarten is a primary art-school; for it employs the prodigious but originally blind activity and easily trained hand of childhood, from the age of three years, in intelligent production of things within the childish sphere of affection and fancy; giving thereby a harmonious play of heart and mind in actively educating. (Peabody, 1890, p. 274).

Fröbel was unique to his time in that he saw drawing as every child's native written language and an efficient means of self-expression (Strauch-Nelson, 2012). He described the relationship between writing and drawing as: "mutually explanatory and complementary. . . neither one is, by itself, exhaustive and sufficient" (1887, p. 79). Fröbel argued that the two modes of expression were "inseparable" and belonged together. Nature study was also foundational to Fröbel's pedagogy. He believed that children's intellectual, moral, and spiritual development were all dependent on their relationship with nature (1887).

By 1900, there were over 5,000 kindergartens in the United States (Osborn, 1980, p. 95). Although kindergarten practices were influenced by other educators, many of Fröbel's ideas persisted. Martha Collins (1898), a follower of Fröbel, taught that the child's relationship with nature should include the nurturing of a sense of wonder, as well as observation of nature's varied forms and processes. Richard Kerton (1907) proposed that romance and wonder could be used to arouse careful observation, inquiry, and thinking. Sleight and Lit (1912) discussed the characteristics that children find compelling in the natural world. Further, the tradition of

encouraging emotional engagement through artistic exploration of the natural world has continued in European kindergartens, with the focus on reading skills put off until first grade.

How might kindergarten teachers in the U.S. support the youngest children in each cohort by nurturing an interest in nature that arouses eager observation, inquiry and thinking? Fröbel provided an answer in the original kindergarten curriculum, which included both art and nature study. In his view, drawing was every child's native written language. The section below looks at how an emphasis on feelings can encourage a young child's desire to learn.

How Aesthetic Education Awakens a Desire to Learn

In her article "Aesthetic Education" published in *Art Education* (1973), Merle Flannery put forward an intriguing definition inspired by the work of the German philosopher Alexander Baumgarten (1735). He had defined aesthetics as "the science of sensuous knowledge." Flannery updated Baumgarten's definition, interpreting aesthetic education as the study of the keyboard of human feeling, in all its breadth and depth. She observed: "When we think of feeling in this new way, it is possible to envision a whole area of learning which public education has almost totally ignored" (1973, p. 10).

Flannery cautioned that public schools were currently leaving students' capacity for feeling to develop by chance. To illustrate how emphasizing feeling might encourage a desire to learn among young children, she included a quote from environmentalist Rachel Carson (1965):

> If facts are the seeds that later produce knowledge and wisdom, then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. Once the emotions have been aroused—a sense of the beautiful, the excitement of the new and unknown, a feeling of sympathy, pity, admiration or love—then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning. It is more important to pave the way for the child to want to know than to put him on a diet of facts he is not ready to assimilate (Carson, 1965, p. 45).

Rachel Carson was well aware of the influence that emotion could have on curiosity. She had developed a deep interest in the natural world at an early age. This later enabled her to write books that had both a remarkable scientific accuracy and a capacity to charm the reader with an invitingly elegant and lyrical prose style. Her prophetic book *Silent Spring* (1962) gave rise to a widespread awareness of the dangers of environmental pollution. The concluding section of this article looks at how art and nature study might help the current generation of young children to discover new interests while building stronger practical, social-emotional and vocabulary skills.

Implementing Nature Study and Aesthetic Education

Wendy Strauch-Nelson (2012) provides an engaging insight into Fröbel's interest in the work of the German author Goethe, whose method of inquiry was inherently artful and playful, asking us "to slowly come to know a natural phenomenon from all sides, to take in the whole and gently move inward, and then to tell its story" (p. 36). That story would likely include individual and universal qualities, relationships, growth, and transformation, honoring the living qualities of

the phenomenon. She also touches on modern approaches to nature study. Holdrege (2005) is quoted, explaining the influence of Goethe's sensorial imagination upon his own practices:

> I retreat from observation and quietly build up a precise inner picture of what I've experienced. The more I've done this, the more I find that my observing and perceiving becomes dynamic and full of life. . . . I have come to see this activity of exact sensorial imagination to be the counter pole to theory building in traditional science (p. 49).

David Sobel (2008), who spent many years examining the relationship between children and nature, was also quoted by Strauch-Nelson (2012). Critical of the top-down approach often taken by educators, Sobel proposed that—instead of teaching about deforestation on a grand scale—we could help children build relationships with the trees they know. In Sobel's view, "Talking to and hiding in trees precedes saving trees" (p. 19). Intriguingly, Flannery (1977) had earlier described a similar experience that she recalled from her own childhood:

> I have a childhood memory of sitting in the center of a lilac bush for the purpose of smelling. The bush was old and large. It had a cavity in the center just open enough to admit the body of a child—it felt like a cradle. Lounging in the cradle I breathed, glowing with the smell of lilacs (p. 23).

A closer relationship between the study of art and the study of nature could nourish student thinking in both areas. All that each child needs are crayons and drawing paper on which to exercise their artistry. If available, nature's open spaces, expansive variety of raw materials, and multisensory appeal will stimulate imagination. Alternatively, the teacher can bring autumn leaves, spring flowers, pinecones, etc. to class when needed. Strauch-Nelson (2012, p. 38) provides suggestions that teachers might wish to experiment with:

1. As modeled by Goethe, infuse integrated art and nature study with stories, a spirit of wonder, awe, and child-directed curiosity.
2. Use versions of children's play motifs as described by Sobel (2008) as the basis for first-hand encounters uniting art and nature. These include adventure, fantasy and imagination, animal allies, maps and paths, special places, small worlds, and hunting and gathering.
3. Encourage comprehensive perceptions through the careful and sensitive study of color, value, form, shape, texture, pattern, context, and movement. Use these to build an understanding of the meaning of harmony, balance, order, transformative qualities, unity and mystery within the natural world.

When they are operating out of an aesthetic, nature-focused consciousness, children do not just categorize objects according to their function or physical properties. The child's attention is focused on *this* apple, experienced at *this* time of day in *this* place (Flannery, 1974). They can not only study it, but draw it, and perhaps take a bite out of it. This helps them build a strong connection with an aspect of the natural world. Through such aesthetic encounters, emotions are aroused, along with a new interest in the object they are studying. This creates vivid memories and encourages further learning.

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